

# THE MEDICAL JOURNAL OF AUSTRALIA

(With which "The Australasian Medical Gazette," and "The Australian Medical Journal" are incorporated.)

The Journal of the Australian Branches of the British Medical Association.

VOL. II.—8TH YEAR.—No. 3.

SYDNEY: SATURDAY, JULY 16, 1921.

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### THE PATHOGENICITY OF THE DEMODEX (OWEN) IN THE HUMAN BEING.

By Herman Lawrence, M.R.C.P. (Edin.), etc.,

Honorary Dermatologist, St. Vincent's Hospital, Melbourne.

Until quite recently the authors of text-books upon skin diseases have agreed that the *Demodex* is non-pathogenic in the human being. However, in the latest edition of his manual of skin diseases, Dr. Whitfield, of London, introduces a new disease, which he believes is due to the *Demodex* and for which he suggests the name of *demodex impetigo*. Dr. Whitfield, having been informed by Dr. Pernet of the fact that I had previously described this disease in a paper read before the Victorian Branch of the British Medical Association at Melbourne in 1915, very kindly gives me priority in the matter. As a matter of fact, I exhibited a moulage of this impetiginous eruption at the International Dermatological Congress held at Rome, 1912.

I have studied the presence of the *Demodex* in skin affections for some years and I doubt very much the innocence of this parasite in other conditions apart from the typical impetiginous condition described by Dr. Whitfield and myself. There are many skin affections in which the *Demodex* appears in such numbers that its possible causative effect in the production

of the disease cannot be overlooked. For in applying parasiticide remedies the disappearance of the parasites and cure of the disease occur simultaneously. A medical man recently consulted me about a scaly skin affection upon his face, which he thought might be a beginning *lupus erythematosus*. Clinically the condition did somewhat resemble that disease. On examination of scrapings from the parts, specimens of the *Demodex* were found to be present *en masse* and the disease cleared up quickly with tincture of iodine pigment and *unguentum hydrargyri camphor. compositum*. The medical man on seeing the microscopic specimens had no doubt as to the *Demodex* being the cause of his skin affection. He had previously applied *lotio calamine* without any benefit. Similarly I have seen cases of *Demodex* infection simulating *pityriasis alba*, *seborrhæa* and often a circinate serous oozing condition of the beard, the patients believing the same to be due to a "foul" shave.

In the class of cases I have described up to the present, not including cases of *rosacea*, I believe the *Demodex* to come from outside sources and not to be the *Demodex folliculorum* ordinarily found in the human skin. I have had several examples showing the undoubted contagiousness of the disease; three members of one family developed the condition at about the same time. In one instance recently met with the father had the "bad shave" condition and

his daughter a week afterwards developed the *demodex impetigo* eruption on the face. Both patients showed the presence of a large number of the *Demodex* and both were cured quickly with parasiticide remedies. I have just read with much interest Mr. Hirst's book upon the *Demodex* (British Museum Edition). But I still find it difficult to distinguish one *Demodex* from another, as there are all sizes and shapes of these parasites which are difficult to fit in with the definite distinctive forms as depicted in the diagrams of Mr. Hirst's book. However, I should say the parasite of this impetiginous condition is thicker and darker than the *Demodex folliculorum* and generally speaking the length of the abdomen as compared with the length of the cephalo-thorax is shorter than in most specimens of the *Demodex folliculorum*.

According to Mr. Hirst, the *Demodex* has a mouth but no anus. The penis, which appears to be of considerable size in proportion to the smallness of the parasite, is situated on the dorsal surface of the cephalo-thorax and what have been previously mistaken for eyes are really tubercles or spines on either side of the *capitulum* (dorsal surface). These spines are important in distinguishing the different varieties of *Demodex*. One would like to know more about the metamorphosis of this parasite, especially as regards the hexapod larvæ and their numbers and the time they take to develop into adult parasites.

Dr. Whitfield says he has not met with the disease in children. I have seen it in children and quite recently a child twelve years of age, daughter of a medical man, was treated by me for *demodex impetigo*. At first I did not find the parasites, no doubt on account of the remedies she had been using, but some fresh spots developing under the chin and upon the forehead showed the presence of numbers of the *Demodex*. This child had a perfect complexion (blonde) and there was no tendency to the kerotic skin of Darier. In some cases of *rosacea* it is not uncommon to find the *Demodex folliculorum* and it would seem that the reflex vasomotor flushings of the skin probably makes the soil suitable for the growth of the parasite, especially so if the subject has a kerotic condition of the skin in the *rosacea* region. In some of these cases I think the *Demodex* undoubtedly produces a good deal of inflammation, favouring secondary pyogenic infection.

It must be remembered that the *Demodex* in the conditions previously described (not including *rosacea*) is not located in the follicles only, but is growing freely in the superficial epidermal structures and anyone who has watched the movements of one of these parasites under the microscope, must feel that if present in numbers they might cause a good deal of inflammatory disturbance in the parts infected. Signs of life in these parasites are seldom seen, but I have watched a *Demodex* upon its back, twisting from side to side, extending and withdrawing its legs and moving clumps of epithelial cells attached to its claw-like processes. It must also be remembered there are the ova, larvæ and what appear to be epithelial encysted parasites and the disintegrating dead parasites, all of which go to make a large amount of foreign and irritating matter. I have also seen a case,

as described by Allen,<sup>1</sup> of small tumours or I should say cyst-like bodies, distributed over the face and forehead. Dr. Allen describes his case as resembling *molluscum contagiosum*, but in my case the condition resembled more half-empty sebaceous cysts. They contained the parasites in large quantities. I would, therefore, suggest for the present the terms *demodex impetigo*, *demodex rosacea* and *demodex cysticum* for the skin affections which I have described and in which the *Demodex* appears in such numbers as to suggest an ætiological relationship.

Of course it yet remains to be seen to what extent dermatologists will accept the pathogenicity of the *Demodex* in these conditions, but the more I study the subject, the more certain I feel that the innocence of this parasite has been too much taken for granted. I have examined scrapings from *impetigo contagiosa*, *lupus erythematosus*, *seborrhœa*, *psoriasis*, *eczema*, etc., occurring on the face without finding such evidence of this parasite as occurs in the cases just described, although of course the parasite can be obtained by expressing sebaceous matter from the follicles of the nose, dissolving in potash solution and examining carefully under the microscope. But the fact that the *Demodex* is frequently present in the skin without causing any apparent disturbance of the parts, does not preclude it from taking on pathological properties when it finds the conditions favourable for its growth. In examining cases for the *Demodex* one should take scrapings from the newly formed spots, as the parasites are easily destroyed by the parasiticide applications usually applied by patients when a skin eruption first appears. If examined with a saline or watery solution, the parasites appear camouflaged, being enveloped in epithelial scales, etc.. They are as difficult to see as young fish hiding in the sand at the sea-side. When the potash and acetic acid solution is used, the parasite is cleared of much of the matter adhering to it and with the high power one usually notices minute, round bodies in the posterior part of the abdomen. This condition is not shown in Mr. Hirst's diagrams. One also notices the markings like finger-prints extending over the body. In my specimens they appear to reach up to the first or second pairs of legs. Perhaps with further microscopical study we may be able to decide whether these parasites are really all varieties of the *Demodex folliculorum* or due to some acquired *Demodex* as that which may be found in the skin of the dog.

#### LECTURES ON MEDICAL ETHICS.

By A. V. M. Anderson, M.D., Ch.B. (Melb.),  
Lecturer on Medical Ethics, University of Melbourne.

#### III.

##### Charges of Malpractice.

One of the dangers that may threaten a medical man at any time after his entering into practice is that a claim may be made against him for malpractice. Sometimes such a claim may be regarded as simple blackmail. At other times it arises from the patient's belief that he has not been properly treated. This belief may have been encouraged by the in-

<sup>1</sup> Quoted by Hirst (British Museum Edition).



judicious or unguarded remarks of another practitioner or in various other ways. There is a society in Melbourne, the Medical Defence Association, which has as one of its functions that of advising and defending or assisting in defending its members in cases where proceedings involving questions of professional principle or otherwise are brought against them. I should advise you all to join this association as soon as you are qualified; you may thereby be saved much anxiety and expense. This association does not undertake to see that no loss, financial or otherwise, falls on any of its members whose conduct has been ill-advised. It will, however, advise any of its members who may be in difficulty of such a kind and, if thought desirable, will pay the costs of legal proceedings in defending an action for damages. It cannot, as some of its members seem to expect, undertake to recover fees from a patient or conduct a general legal business for its members. To protect oneself from such action it is, of course, necessary to make the most careful examination and in any doubtful case to suggest the advisability of another opinion by an expert. If this is refused the onus of the refusal should be thrown on to the patient or the practitioner should decline to treat the patient. Under such circumstances he should take careful notes where there is any possibility of future trouble. The legal principle which is the basis of actions for malpractice, is that "every person who enters into a learned profession undertakes to bring to the exercise of it a reasonable degree of care and skill; he does not undertake, if he is a surgeon, to perform a cure nor does he undertake to use the highest possible degree of skill. There may be persons who have higher education and greater advantages than he has, but he undertakes to bring a fair, reasonable and competent degree of skill and the question is whether the injury must be referred to the want of a proper degree of skill and care in the defendant or not."

The degree of blameworthiness in a case in which a medical man gives instructions to a nurse to carry out certain treatment and the nurse does so in a way that causes injury to a patient, is a matter which has been referred to a Court of Justice. A decision has been given that in the case of public hospital patients medical men who give their services gratuitously, are not to be made liable for negligence for which they were not personally responsible. The same principle would probably apply in a case where certain duties were ordered to be performed by a nurse in private practice.

#### The Relation of the Medical Practitioner and the Dentist, Pharmacist, Masseuse and Nurse.

There are certain professional callings which have a close relation to that of medicine. As you will frequently be brought into association with these, it is well to know something of your position in regard to them. They include those of dentists, chemists, masseurs and nurses. Each of these professions has advanced considerably in status of late years. Some of those who practise them, have University training and degrees and so merit recognition from medical men as engaged in allied professions. With regard

to dentists, in England many have a medical qualification as well as a dental one. In Victoria this is not the case, with one or two exceptions, but dentists have special training and knowledge which must be appreciated by the medical men. It is not right that a patient should be sent to a dentist with a direction that certain treatment should be carried out. A statement that dental attention of some kind is necessary, or better still an interview between the medical man and the dentist and consultation as to treatment is the most desirable method.

With chemists the relationship is usually that of prescriber and dispenser, but it is well to recognize special knowledge of the properties of drugs and of the best way of prescribing them, which the chemist possesses and to pay attention to his advice as to incompatibilities, etc. Many chemists complain of the expense to which they are put in the purchase of new drugs which have a vogue for a time and then are not used again. They also complain of the fact that varieties of the same drug or same compound differing little from another are apt to be prescribed by medical men who refuse to have any substitutes. A certain amount of consideration should be given by medical men to these annoyances.

In the case of masseurs as of nurses who have to take their directions from you, you have to remember that each of them should be looked upon, not so much as the employee or the servant of the medical man, but rather at his co-adjutor in the treatment of the patient.

Reasonable care is to be taken by medical men in writing prescriptions for their patients. There is usually a safeguard in the fact that a chemist carefully peruses the prescription and in case of any doubt communicates with the medical man before dispensing a prescription, for example one which apparently contains an overdose of some medicine. If you are rung up or called upon by a chemist who is inquiring as to the correctness of a prescription, you must not take this, as is occasionally done, as an impertinence. Many mistakes on the part of medical men may be thus avoided. In writing a prescription, legibility is a matter of importance. Whether the directions on a prescription should be read as *m.d.s.* or *m.d.u.* may be a vital matter. Many years ago in Melbourne a medical man had to stand his trial for manslaughter partly because the directions appeared to indicate that a certain compound should be taken instead of used. The patient took the medicine prescribed and unfortunately died very soon afterwards from an overdose of an opiate. Cases are on record of similar occurrences where sulphide of barium was dispensed instead of sulphate of barium and the *m.d.s.* was read by the chemist as *m.d.u.* You might possibly be subjected to considerable inconvenience from any such happening; the moral is: that you should write legibly.

If at any time you are prescribing a dose of a drug that is larger than that ordinarily used, it is desirable to underline the dose and place your initials alongside. You may sometimes have difficulty in cases where you have ordered a mixture for a patient and the patient has taken it to a chemist who has dispensed the medicine and retained the prescription,

taking it as his authority for making up the medicine. It cannot be said that there is any strict ruling as to the ownership of a prescription. It is ordinarily regarded as being the property of the patient, but this is not always acknowledged by the chemist. If he does retain the prescription, he will usually give a duplicate to the patient, who may have it made up at another chemist's subsequently if he wishes. Many patients are in the habit of having a prescription made up time after time and of taking it whenever they think they need it. Some even go further and give it as an infallible remedy to some friend who appears to have an ailment similar to their own. Some medical men, to prevent these sources of danger, write on the prescription that it is not to be dispensed more than once without a further order. This throws the onus of dispensing it again on the chemist, who, in the majority of cases will abide by the instructions of the medical man. This abuse of prescriptions is unfortunately not uncommon in the case of sedatives and narcotics, such as veronal, sulphonal, etc. Many accidents have occurred from the indiscriminate use of such prescriptions. I should advise you to be very careful in prescribing such drugs. It is wise in this case to direct on the prescription that no repetition should take place without further order. Such precaution applies sometimes even to such drugs as the bromides, the long use of which may do much harm to a neurotic or debilitated patient. It is especially applicable to opium or its derivatives. Medical men are aware of cases in which an opium or morphine habit has arisen from a prescription given by a medical man and many morpho-maniacs have acquired the habit as the result of medication originally prescribed by a medical man. Fortunately morphine, especially in its hypodermic form, is much less used now that it used to be. I should advise you always to be most sparing in its administration. Do not use it as an hypnotic until other means have failed, or in cases where its use cannot be carefully controlled.

Much the same thing may be said in regard to the prescription of alcohol as a medicine. Its use is much less frequent than formerly. In the Alfred Hospital the annual cost of alcohol for all patients is not much more than one-tenth of what it was 25 years ago. Even in cases of acute diseases we rarely see the daily use of 180 or 240 c.cm. of brandy as a stimulant as was common in olden days. The value of the drug except in rare cases is problematical. The immense amount of harm it does, apart from its medicinal use, is certain and the possibility of forming an alcohol habit is always to be borne in mind. I have seen such a habit acquired by a lady of 77 who had been ordered a little whiskey as a night cap for insomnia. In cases of chronic illness or in neurotic people and especially in women you should be particularly careful in avoiding the use of alcohol as a remedy.

Medical men themselves are certainly very much more temperate than they used to be. Soon after the war started the proper position of alcohol seems to have been recognized by the profession. In May, 1915, the following resolution of the Council of the Victorian Branch of the British Medical Association was passed:

It is impossible to over-estimate the value of example, especially if it be set by the whole of the members of a humane and learned profession and the Council believes that it is thoroughly justified in asking all its members who are willing and physically able to do so, to pledge themselves to abstain from the use of alcohol during the continuance of the war.

At a meeting in the following month it was decided that the above resolution should be printed and issued to members with the addition of the following:

The Council very strongly urges its members to set an example by adhering to the above resolution.

Nearly all the reasons which would prompt the carrying out of the principles contained in this resolution, are applicable to conditions after the war is over.

In certain cases of incurable disease the question of a possible euthanasia is sometimes mooted. It may be laid down as an invariable principle that, although a medical man is justified in giving to a patient suffering from an incurable disease all the help and comfort he can, he is under no circumstances justified in doing anything that is likely to cause or hasten death. As Saundby says: "Nothing should be done to warrant any suspicion that the sanctity of human life is trifled with by the medical profession."

#### Interference with Pregnancy.

This naturally brings me to the question of the induction of premature labour, a matter which you will probably already have heard of in another course of lectures. To bring about such a result in cases of illegitimate conception or to suit the convenience of an unwilling prospective mother has always been regarded as a wrongful act. Medical men who do this for gain, are looked upon with aversion and are criminals in the eyes of the law. A different state of affairs exists when the question has to be considered as it affects the health or safety of the mother. In this respect much more attention has of late years been paid to the life of the child than was formerly the case. It may be laid down as an axiom that before the child is viable the termination of pregnancy is to be looked upon as a matter to be brought about with the greatest reluctance. No medical man who values his reputation, would adopt such a procedure without the most careful consideration and without taking into his counsel the advice of a skilled specialist. It was said by a well known gynaecologist with much truth that pregnancy is a physiological process and that to endeavour to cure a pathological condition, such as *Bacillus coli pyelitis*, by bringing to an end the physiological process of pregnancy with which it is associated, is scientifically unsound. Where one has a dead foetus to deal with the position is different, but in every case of a viable child the rule must be laid down that everything must be done to cure the pathological condition before resorting in the last instance to the operation of the induction of premature labour.

Where the child is living and may survive, as after the seventh month, any operation which involves the death of the child is to be most strongly deprecated. The great success which has attended the operation of Cæsarian section is such as to condemn the operation of craniotomy in a living child. Whether the procedure should be abandoned altogether in these circumstances is a difficult matter to decide, but that

it should be much less frequently done than has hitherto been the case is to my mind certain. I feel that medical men are much indebted to the teaching of one of the great branches of the Christian church for its advocacy of a more scientific and life-saving method of dealing with obstetric diseases.

You will occasionally, in your practice, be brought into contact with questions of religion. The greatest respect should be paid to the views of patients on religious matters and every facility given to sick people to avail themselves of the services of their religious advisers. Particularly is this the case with Roman Catholics, who regard the religious offices of their church in cases of dangerous illness as of the highest importance. Even after death has occurred certain ceremonies have to be observed in some religious denominations; no obstacle should be placed in the way of these ceremonies in hospitals. You must remember that *post mortem* examinations in hospitals, however desirable they may be in the interests of science, are often repugnant to relatives of the deceased and should not be carried out in a routine manner in opposition to the wishes of these relatives.

#### Approval of Marriage.

You may occasionally be consulted as to the propriety of one of your patients getting married and you must be prepared to give advice in this matter. There are many who think it a very desirable thing that a person should be legally compelled to obtain a certificate of physical and mental health before marriage. This is not required as yet, but it may be possible for you in the course of your ordinary medical practice to give good advice *pro* and *contra* in regard to a patient's fitness for marriage. Saundby says that the medical man should advise against marriage under these circumstances:

(1) Where the married state and its contingencies would jeopardize the health and perhaps the life of the patient, as in uncompensated organic heart disease or greatly contracted female pelvis (In the latter case the possibility of the necessity of a Caesarian section might have to be laid before the patient).

(2) Where the patient is suffering from a disease which is more or less likely to be transmitted to the children (for example, syphilis).

(3) Where the patient is suffering from or liable to suffer from a disease which prevents the performance of social or marital duties (tabes, general paralysis).

(4) Where the patient's life is uninsurable and early death might interfere with the proper provision and care of the offspring of the marriage.

The greatest care should be taken in pointing out the danger of marriage to patients suffering from epilepsy or advancing phthisis and in those with a strong family history of mental aberration. You should be very cautious in approving of the marriage of patients with certain neurasthenic symptoms, which are sometimes of a sexual nature. A well known text-book recommends marriage or something nearly equivalent for these neurasthenic disorders. It is hardly possible in these days, when we know the risk of contracting venereal disease, to over-emphasize the fact that no self-respecting medical man should countenance or advise any course of action which is immoral. You should be emphatic in your declaration that a life of chastity is compatible with the soundest health.

#### Professional Secrecy.

From the time of Hippocrates it has been recognized that it is the duty of a physician to keep inviolate secrets confided to him by his patients; this still remains one of the strictest principles of medical ethics. The reason for this is that in order to obtain exact information as to the history of the disease, it is necessary to learn certain facts that the patient would not disclose if he thought that there was a possibility of them becoming known to people other than the medical practitioner. So strict is this confidence that even in civil cases by Courts of Law it is not expected that a medical man should disclose facts as to the health of a patient which he has learned during the course of his medical attendance. This matter will be referred to later, when I speak of the duties of a medical witness in a legal case.

In his ordinary work a practitioner is frequently asked questions by one patient as to the health of other patients. Any answer to such questions must be in the most guarded and general terms. Even when referring generally to his experiences he should be very careful that such conversation contains nothing that may disclose what may be called a professional secret. One of the reasons that is sometimes given for an unmarried doctor being chosen by a patient rather than a married one is that the patient fears that the latter may disclose professional confidences to his wife. The best rule to follow is that professional work must not be taken into daily social life. It is sometimes a matter of difficulty where an employer requests a doctor to examine an employee to keep the confidences of the patient, but this must be done as strictly as in the case of an ordinary patient's; no information may be given to employer or friend without the expressed permission of the patient. Even with near relatives of the patient a great deal of caution is necessary.

The serious consequences that may happen to a medical man, who unwisely talks about his patient's illnesses to relatives, were shown by the result of a legal action which took place some years ago in the English Law Courts. A medical man had operated on a distant relative of his own and came to the conclusion that she was in an early stage of pregnancy. He communicated his suspicions to another relative and this conversation came to the knowledge of the patient who brought an action against the doctor and recovered from him damages to the extent of £12,000, £2,000 more than she asked for.

Very great caution should be exercised in expressing an opinion (especially where there is no certainty in your mind) to a patient who is suffering from a very serious illness. While always keeping in mind the possibility of a fatal termination to an illness in a patient suffering from what may be a grave or incurable disease, you should remember that the patient should not be too much depressed. It is always wise to inform the near relatives of a patient when a fatal result is possible and if a patient's affairs need to be put in order or a will made, the warning to the friends is especially needed. Do not underestimate the gravity of a case in its early stages; for example in pneumonia, typhoid or acute appen-



dicitis remember that there is a certain percentage of mortality and certain grave complications in the disease. In the treatment of your patient act as if this case might be a serious one. We frequently see the mental perturbation and despondency of a patient who hears that he is suffering from "D.A.H." (disorderly action of the heart), a condition usually neurotic and not dependent on any organic cardiac trouble. We should recognize that harm may be done by an incautious diagnosis, or even a chance word of a medical man, the meaning of which may be easily misunderstood or distorted by an anxious patient.

If a patient is suffering from a disease which is likely to be attended with fatal consequences and if he wishes to know your candid opinion, you must give it. You may qualify such an expression of opinion by hinting that the diagnosis was not certain and that many patients supposed to have been suffering from the same condition in a serious form have recovered and have outlived their pessimistic medical attendants.

A medical man sometimes discovers or suspects that the illness for which he is treating a patient, is the result of an illegal act. This has special reference to the case of abortion in a single woman, when a patient who has had an illegal operation performed upon her consults or calls in a medical man to attend her in her subsequent illness. It is not the duty of the medical man in such a case to act the part of a detective and to inform the authorities that he believes or knows that an illegal act has been committed. If he did so act and, if patients in such a condition knew that it was the custom to inform the authorities, many women who were ill, would neglect to see a medical man and much serious illness and possible loss of life might result.

Some years ago the Royal College of Physicians of London obtained legal opinion on this matter and subsequently agreed to certain resolutions which were finally adopted in the following form after they had been submitted to the Public Prosecutor for his approval. The resolutions are as follow:

(1) That a moral obligation rests upon every medical practitioner to respect the confidence of his patient; and that without her consent he is not justified in disclosing information obtained in the course of his professional attendance on her.

(2) That every medical practitioner who is convinced that criminal abortion has been practised on his patient, should urge her, especially when she is likely to die, to make a statement which may be taken as evidence against the person who has performed the operation, provided always that her chances of recovery are not thereby prejudiced.

(3) That in the event of her refusal to make such a statement, he is under no legal obligation (so the Colleges advise) to take further action; but he should continue to attend the patient to the best of his ability.

(4) That before taking any action which may lead to legal proceedings, a medical practitioner will be wise to obtain the best medical and legal advice available, both to insure that the patient's statement may have value as legal evidence and to safeguard his own interests, since in the present state of the Law, there is no certainty that he will be protected against subsequent litigation.

(5) That if the patient should die, he should refuse to give a certificate of the cause of death and should communicate with the Coroner.

If you are consulted by a patient who is suffering from an infectious disease, say whooping cough, you are not justified in warning other people who may be infected by contact with the patient. Your proper course is to warn the patient of the risk other people with whom he associates, are incurring and leave the responsibility to him. In most infectious diseases the law requires notification and must be obeyed. Apart from this, the obligation of secrecy holds good.

Some years ago a medical man wrote to the *British Medical Journal* asking for advice under these circumstances. He was consulted by a railway signalman, whom he found to have asthma and to be subject to serious attacks which incapacitated him for somewhat prolonged periods. It was possible that during one of these attacks, through his neglect to use the signals, a serious accident might occur. This was explained by the doctor to the signalman, who was advised to state his position to the railway company, in whose employ he was, or to allow the medical man to do so, so that arrangements might be made for an alteration in his duties. The patient refused to agree to either of these alternatives and announced his intention to "keep on with his job." The medical man asked the Editor of the journal if under these circumstances he should inform the company. The Editor said that he must not do so, but must preserve the secrecy imposed upon him by his patient. The assumption was apparently that a company should have periodical examinations of its officers made by a competent medical man, so as to insure that the employees were in a fit state of health to perform their duties satisfactorily and that they must not expect their neglect to be corrected by the unethical action of the private medical attendant of their employee. Objection was taken to the dictum of the Editor of the *British Medical Journal*. There is very little doubt that had the medical attendant informed the company of his patient's ailment and of the danger associated with it, he would not have run much risk of having damages given against him if the patient had brought an action at law. Still it seems only right that some system of periodical examinations of employees holding responsible positions should be made by medical officers of the companies concerned and that this is the proper solution of the difficulty.

#### Emergency or Casual Practice.

It must be remembered that no medical man is justified in making an examination of any person at the sole instance of an employer, police official, coroner or similar authority without the consent of the person concerned. To do so would be technically an assault and would expose the examiner to the risk of an action for damages.

The possibility of a medical man being subjected to blackmail by designing people, women especially, must be kept in mind. It is not an unknown thing for a medical man to have a false accusation brought against him by some woman whom he has examined in his surgery. It is well, therefore, especially in the case of single women, to have someone present in the room or in the near vicinity when making such an examination. In view of these possibilities it is a very desirable thing that the medical man concerned



should be a member of the Medical Defence Association.

Fault is sometimes found with a medical man for not at once rushing off to visit a patient who has sent for him. Medical men are sometimes regarded as being indirectly responsible for the death of a patient who has died without medical attendance under such circumstances. Ordinarily it may be said that a medical man who enters upon the profession of medicine, renders himself liable to attend any patient, whether one of his own or not, in any sudden emergency. This is especially the case where the medical man is the only one available in the locality; but in places where another doctor may readily be found, it is hardly to be expected that a busy medical man should break an appointment to attend a patient whom he has not seen before and who may not be seriously ill. The call often comes from one who is not responsible in any way and such calls are apt to be financially unprofitable. In Paris, doctors who are willing to undertake such emergency work, have their names inscribed on a list kept at the nearest police office and they are paid out of public funds. A similar method here would be very serviceable and might prevent some medical men from being blamed on the score of inhumanity.

It sometimes happens in seaside or country holiday resorts that a visiting medical man is asked to see a patient, although there is a resident doctor available. Such practice on the part of a visiting medical man is to be discouraged. He may in an emergency act for the local doctor during his absence and then resign the case to the latter on his return. A series of suggestions for a uniform procedure under these circumstances has been approved of by the Council of the Victorian Branch of the British Medical Association. These suggestions are as follow:

(1) It is a recognized rule that no practitioner is compelled to attend an emergency call, but having seen the case or advised treatment, responsibility for the case is accepted.

(2) Where no resident practitioner is available the visitor is entitled to attend patients if requested and should charge such fees as would obtain if he were treating the case at home.

(3) Where there is a reputable medical practitioner established in or within a reasonable distance of the holiday resort (say ten miles) the visitor should consent to see a patient only as acting for his colleague. If, after this, his opinion is further desired, he should act only as consultant and charge consultant's fees.

(4) If a reputable medical practitioner is established outside a ten-mile radius, but, nevertheless, makes regular visits at short intervals to a holiday resort, he may be regarded as being a resident practitioner.

(5) Some modification of the above suggestions may be permissible where the visiting practitioner and the patient already stand in the relation of doctor and patient at home. If, however, attendance is given under such conditions, the practitioner should charge such fees as he would if attending the case at home. If the local practitioner is already in attendance, the visitor should act only as consultant.

(6) Where the visitor is compelled to undertake a case which appears likely to require prolonged attention, arrangements should be made for the transfer of the patient to the usual medical attendant, if there be one, at the earliest opportunity.

(7) Where a practitioner is summoned from home to attend a patient at the holiday resort, full mileage rates should be added to the fee.

(8) Gratuitous advice at holiday resorts is to be deprecated except under such circumstances as would obtain at home.

It does not follow when you are called to attend a patient that you are to continue your attendance till the conclusion of the illness. If another medical practitioner has been consulted without your consent, or if your advice is not being followed, or if the patient is taking sedatives, alcohol, etc., without your permission, you are at liberty to retire, provided that you are assured that other efficient medical attendance can be obtained for the patient.

Sometimes one feels inclined to retire from a case because cure is impossible and you do not wish to give useless attendance to the patient. Under such conditions, however, you may be able to do something to relieve the patient and if he or his relatives wish you to continue your visits at occasional intervals, it is right for you to do so.

Now and again, though very rarely, you are suspicious that the patient is receiving certain treatment which is detrimental to him, for example, that excessive alcohol is being administered or that opium or other poisonous substances are being given. Your position under such circumstances may be very difficult. Sometimes you may mention your suspicions to the patient or, with great caution, to some reliable friend. Usually it is better to advise removal to a nursing home or hospital, in which you are sure treatment will be carried out according to your instructions; you would be quite justified in refusing to continue to attend the patient except under such conditions.

In all your attendance on patients you should endeavour to be punctual and regular. It is sometimes very inconvenient for a patient or his friends to be unaware when a medical man is coming to visit and you should each time you call if possible let the patient know the day and hour of your next visit.

You will often find yourself subjected to much inconvenience by unnecessary calls in a midwifery case. Here it as well to call as soon as possible after you are sent for and your subsequent calls will be much less burdensome to you if the patient has a competent and reliable nurse. It is most desirable, therefore, that you know and approve of the nurse who is to be your principal assistant on the occasion. There is at present a Midwives Act in Victoria, but no Act of Parliament which sets any standard of the training and qualifications for nurses other than midwifery nurses. There is, however, a nurses association, the Royal Victorian Trained Nurses' Association, which has made arrangements for the proper training of nurses. It should be the aim of all medical men in their own interests and in that of their patients to make sure that any nurse with whom they may be associated, has proper qualifications and status. It is not an unusual thing for a medical man to suggest a nurse to his patient nor for a nurse to recommend a doctor to a patient. It must be understood that no question of commission or any other form of benefit arises from this relationship. Cases have been recorded where a medical man has paid a fee to a nurse in a midwifery case if the nurse sees that the *accouchement* is over before the doctor's

arrival. Such an understanding is injurious to the patient, is quite indefensible and should not be countenanced.

#### Surgical Operations.

A certain amount of attention has been given to the ethics of operating and this matter deserves some consideration. Before the advent of anaesthesia and asepsis, operations were usually performed only by specialists, whose fees were commensurate with the difficulties and dangers of the operation. At the present time, when the field of operative surgery has become so much wider and when the exigencies of general practice, in the country especially, may make the immediate performance of an operation an urgent necessity, surgical ability in some degree is presumed to be the possession of all doctors. Surgical practice in large hospitals is almost exclusively operative or follows on operative procedure. It would appear, therefore, to the student, that operations are necessarily the most important part of surgical practice. There is sometimes in the lay mind a suspicion that the financial consideration tends to increase the number of operations and to cause their performance when other procedures, perhaps slower in their results, might be adopted. I have already stated my opinion that from the ethical point of view, a patient seriously ill is entitled to the best possible advice. Similarly where a difficult or complicated operation is proposed he is entitled to the best surgical skill obtainable. Therefore, in these cases, such help should be requisitioned. Above all things, the necessity for the most careful aseptic or antiseptic technique should be borne in mind and every care taken to insure this. Even the simplest operation may be followed by disastrous results; this may happen because of the failure of some very small item of aseptic technique. It seems as if we hear less of exploratory operations than formerly. It seems hardly necessary to point out that before such an operation is undertaken, every possible means of diagnosis should be exploited and that the number of purely exploratory operations should be restricted as much as possible. In all cases the value of the operation in regard to the patient's life and health must be the first and most important consideration. You should not be persuaded by a patient to perform an operation against your better judgement and in all cases the possibility of danger to the patient should be kept in mind and explained to him. I have heard a surgeon say that a mortality of 0.7% in a large series of cases of operation for the radical cure of hernia was a negligible mortality and need not be taken into consideration when recommending the operation. This is surely not quite a candid or fair-minded statement. You must all have seen patients after having been subjected to operation for certain conditions which have not been improved by the operative procedure, who have had other disabilities added to the original one, such as ventral hernia or a troublesome adhesion. It is your duty to keep in your mind and to convey to that of your patient a guarded opinion as to the future possibilities. Many patients consent to an operation not realizing the possibility of its failure to produce the desired result and believing that no harm of any kind can come from the operation; there is, consequently, regret and disappointment if the result is not all that was desired and expected.

According to Saundby, the question as to the desirability of the performance of an operation should rest in the last resort with the ordinary family attendant of the patient. This can hardly be taken to apply literally in all cases, but it is probably within the province of the ordinary medical attendant to put the arguments for and against an operation before his patient. It is certainly desirable that the attending doctor should be present at an operation whether he takes any part in it or not. Sometimes a family practitioner considers himself slighted because an anaesthetist or assistant other than himself is selected by the operating surgeon. The responsibility for the proper performance of the operation, however, lies with the operator and it is his duty to select the most reliable assistance he can obtain. The giving of anaesthetics has become a speciality and the operator has much more ease of mind in doing his work if he knows that he can rely thoroughly on his anaesthetist.

The question of the position of the anaesthetist in operative work has been much discussed. By some it is claimed that the direction as to the administration of the anaesthetic should be in the hands of the operating surgeon. I do not think that this is the right position to take up. The surgeon may let the anaesthetist know his wishes as to depth of anaesthesia, the desirability or otherwise in the particular case of a preliminary narcotic, etc., but when he has done this, it seems only reasonable that the best way of carrying out the operator's wishes should be left entirely to the discretion of the anaesthetist.

In cases where the patient is clamouring for an operation which is thought by the attendant to be inadvisable or unnecessary, advice is sometimes given that a bogus or sham operation should be performed, a simple skin incision being made and then at once sewn up, the whole thing being done, of course, while the patient is under the influence of an anaesthetic. Such a procedure is to be strongly deprecated.

### Reviews.

#### CLINICAL HAEMATOLOGY.

In 1917 Dr. Cecil Price-Jones produced for the benefit of the general practitioner an admirable little book on clinical haematology. This short guide to practice has met with the appreciation it deserved and we now have a second edition as evidence of the popularity of the first.<sup>1</sup> The information contained is the same. In a few places minor improvements have been introduced. In short, the second edition differs but little from the first. In again recommending this book to the busy practitioner, we are influenced by the consideration that the text books on blood physiology and pathology contain information concerning the significance and origin of each distinct variety of blood cell. It is consequently a laborious task to use this information when a diagnosis has to be made with the aid of the blood picture. Dr. Price-Jones's book supplies under the rubric of particular diseases or groups of diseases a description of the typical blood pictures. In the account of the normal blood picture the reader finds excellent coloured plates to remind him of the characters of each kind of cell, while the abnormal elements are equally well depicted in other plates. The author has perhaps sacrificed too much in condensing his account of the anaemias into eight and a half pages. He has, nevertheless, exhibited much skill in including the more important facts bearing on diagnosis in this small space.

<sup>1</sup> Blood Pictures: An Introduction to Clinical Haematology, by Cecil Price-Jones, M.B.; Second Edition; 1921. Bristol: John Wright & Sons, Ltd.; Demy 8vo., pp. 63, with five coloured plates and three illustrations in the text. Price, 6s. 6d. net.

## The Medical Journal of Australia.

SATURDAY, JULY 16, 1921.

### Nurses and Hospitals.

Nurses, like doctors, have obligations to the public which are paramount. The possession of special knowledge and skill in nursing and in medicine has a national significance and consequently the members of these two professions are not free agents to conduct their business to their own advantage in the manner best suited to themselves, but have to recognize a certain degree of servitude. The implicit trust which the community imposes in both the doctor and the nurse, has to be honourably met. It has long been recognized that some form of control is necessary to maintain the honour and dignity of both professions. This control is based on ethical, professional and educational considerations. The British Medical Association has for many years acted as the guardian of the medical profession within the British Empire. It has been instrumental in formulating the present code of medical ethics which governs the professional behaviour of its members. It has moulded medical practice so that the profession as a whole commands the respect and admiration of the entire community. It has used its immense influence in adapting the teaching of medical students to the needs of the moment and in providing means for the continued education of medical practitioners. Unfortunately there is no analogous nursing guild recognized as the mouthpiece of the nursing profession throughout the British Empire. In Australia there exist to-day two powerful bodies controlling within limits the professional lives of the nurses. The Australasian Trained Nurses' Association was originally established as a local organization in New South Wales. Its constitution was drawn in such a manner that expansion of activity and extension of control could follow. Subsequent to its establishment, branches in other States were founded, but the constitution was allowed to remain somewhat elastic and not quite adapted to the important functions it has to perform. In Victoria the Royal Victorian Trained

Nurses' Association has occupied a position similar to that of the Australasian Trained Nurses' Association, although no attempt appears to have been made to exercise control over nurses outside the boundaries of Victoria nor has the proposal to join hands with the sister society been received with favour. It is obvious that the nursing profession and consequently the public would be greatly benefited if one great representative nursing association could assume the control throughout the whole Commonwealth. During the past few days a conference has been held in Sydney between delegates of the Branches of the Australasian Trained Nurses' Association and at this conference the suggestion has been debated that there should be formed a Federal Council of the Association, consisting of members elected by each Branch. The weakness of the present proposal is that there is no inducement for the Royal Victorian Trained Nurses' Association to join in the scheme and to take its share in the management of the larger organization. In view of the immeasurable value of unity and true democracy, we trust that wise counsels will prevail and that an offer will be made by the Royal Victorian Trained Nurses' Association to take part in this scheme of federation. We understand that it is proposed to incorporate the federated body under the Companies Act of one of the States as a company conducted not for gain. This would give the Association a legal status and increase its power for good.

Among the functions of a great controlling body of the nursing profession is that of safeguarding the interests of its members employed in public hospitals and of determining the standard of efficiency required for admission to the Association. In some States the certificate of the Trained Nurses' Association is the hall mark of the professional nurse. In other States the registration of nurses is governed by Act of Parliament. While it certainly seems a dangerous and illogical position that admission to a profession should be controlled by a body devoid of statutory authority, experience has shown that this power has been wisely and judiciously used in the Commonwealth by the two great Associations. Nevertheless, there are many sound arguments in favour of State registration of nurses. For the present, the societies have duties toward students as well as to-



ward trained nurses. In the public hospitals there are medical students and nursing students, usually called trainees or probationers. The former are regarded as true apprentices and are required to pay for their apprenticeship. The latter stand rather in the relationship to the management of the hospital of unskilled employees paid for work which is often arduous, sometimes disagreeable and always important. This is neither advantageous to the young women undergoing training, nor to the best advantage of the patients. The young women, like the medical students, start at zero and have to work their way up to the possession of knowledge and skill under the guidance of teachers. They should be real apprentices and they should recognize that their services at first have a very small intrinsic value. Under the old condition in Great Britain probationers either paid a weekly premium during their first year or received in addition to their board and lodging a small honorarium as pocket money.

It is one of the functions of the nurses' societies to take steps to prevent the management of hospitals from sweating either the young women undergoing training or the trained nurses employed for their skilled services. But this limitation of healthy work should not be driven too far. The medical student has to work hard to attend all his lectures, classes and demonstrations, to learn his work and to pass his examinations. The probationer or trainee must also work hard and unselfishly if she is to develop into a highly trained and useful nurse.

In Queensland a few trainees and dissatisfied nurses have taken the absurd and wholly unprofessional step of securing registration as a trades union. This misguided body of foolish virgins has sought a nurses' award in the Industrial Arbitration Court. The President was wise enough not to grant all the ridiculous privileges claimed. An award had to be given and a perusal of its terms will convince every one that the President has not imposed regulations of a very damaging nature. Nevertheless, this award will have the effect of increasing the cost of public hospitals, which are already overburdened. It will not improve the status nor the standard of professional ability of the nurses. It may act as a precedent for irresponsible trainees to endeavour to dic-

tate the conditions of training. In the interests of the sick poor, for the benefit of the community and for the honour and dignity of the nursing profession, we trust that the Australasian 'Trained Nurses' Association will be enabled to carry out its programme of federation to embrace the whole Commonwealth and with the weight of its increased authority, to lead aspirants to membership of the nursing profession away from these silly and harmful ideas of socialism gone mad.

#### THE PHYSIOLOGICAL ACTION OF HISTAMIN.

It has become a habit with both clinicians and pathologists to postulate the existence of a toxin when an otherwise inexplicable symptom complex is offered from explanation. It is obviously inadmissible from a scientific point of view to assume the presence of a substance endowed with specific properties unless it can be demonstrated that such a substance actually exists. When it was shown that the broth or other fluid in which diphtheria, tetanus, dysentery and a few other bacilli are grown, acquired a special toxicity and that the symptoms produced by the injection of the fluid freed from the bacteria were indistinguishable from those of the disease, various attempts were made to account for the signs and symptoms of those diseases which were caused by other bacteria. The fact that it became possible to produce antitoxins active toward the toxins of diphtheria, tetanus and dysentery distinguished these organisms from others which neither imparted toxic qualities to the fluid pabulum of the culture, nor presented a condition suitable for the production of an antitoxin. In order to explain the disease symptoms, an endotoxin, as distinguished from the exotoxin of the diphtheria bacillus, was postulated. Pfeiffer held that the poison was contained within the cytoplasm of the bacterial cell. Later it was suggested that the protein of the bacterium itself was the toxic substance. Victor Vaughan endeavoured to present evidence to prove that the bacterial proteins on cleavage yielded the disease-producing element. Jobling and Petersen argued that the symptoms of the disease were produced by the proteins of the patient's serum; the bacteria were supposed to neutralize the anti-ferments in the serum and thus to allow the normal ferments to liberate the proteid poisons. All these hypotheses were set up in the absence of direct evidence of the existence of a poisonous substance capable of producing the symptoms of the disease. All attempts to discover a chemical substance peculiar to each infective disease either in the infected organism or in the test tube have failed. It is not suggested that the symptoms of enteric fever or of tuberculosis are not produced by some chemical substance. As far as is known bacteria can only exercise a damaging influence in the tissues of the site of invasion. We are therefore forced to the conclusion that general or constitutional symptoms must be caused by a soluble chemical substance. The claim

made by Dr. John R. Paul,<sup>1</sup> in his investigation into the relation of histamin to leucocytosis, that endotoxins are inseparable from the protein molecule, does not appear to be based on acceptable evidence. Since this hypothesis seems to have found favour with many pathologists, it is not surprising that the further proposal has been made that the bacterial toxin is either similar to or identical with histamin. It will be within the recollection of all that Dale and Barger carried out some highly ingenious researches in connexion with the possible identity of surgical shock and the effect on the human body of histamin. The constitutional symptoms of bacterial infections are almost constantly fever and leucocytosis. Dr. Paul has therefore endeavoured to ascertain whether repeated small doses of histamin give rise to leucocytosis. It has been claimed that proteins administered parenterally produce fever. Unfortunately this claim does not carry conviction, since it can be shown that even distilled water containing the dead bodies of a few bacteria when injected intravenously gives rise to fever. Dr. Paul now reports that the number of white cells in the blood stream of a rabbit that has received intravenous injections of histamin, remains unchanged. A slight leucocytosis was noted when large doses were given subcutaneously, but Dr. Paul is not disposed to regard this rise in the number of leucocytes as pathological. We are consequently still ignorant of the real nature of the substance which leads to constitutional symptoms in the majority of infective processes.

#### PHOSPHORUS AND RICKETS.

In the course of their studies on rickets, Drs. P. G. Shipley and E. A. Park, of the Department of Pædiatrics, and Drs. E. V. McCollum and Nina Simmonds, of the Department of Chemical Hygiene, of the Johns Hopkins University, have endeavoured to correlate the phosphorus ion content of the diet and the appearance of bone changes in laboratory animals. It has been shown by E. Mellanby that rickets can be produced in puppies by the ingestion of diet deficient in fat-soluble A accessory food factor, often spoken of as the anti-rachitic factor. It does not necessarily follow that because the condition is produced in this manner, that no further elements are concerned in its pathogenesis. Previous observations on the calcium intake led the investigators at the Johns Hopkins University to devise experiments to reveal the part played by the phosphate ion in the development of rickets. They now report some suggestive results.<sup>2</sup> Rats were fed on diets adequate in regard to protein and other essential chemical constituents, save phosphorus and the fat-soluble A vitamin. In the absence of the fat-soluble A factor no growth is possible and death necessarily follows. Xerophthalmia developed in all the animals. The rats fed on this diet with a small phosphate ion content were found to suffer from bone changes similar but not identical with those of human rickets. The changes are said to bear a striking resemblance to the changes in rickets during the stage of incomplete

healing. Scattered throughout the cartilages and metaphyses were irregular deposits of calcium salts. The degree of this affection varied widely, although the same diet was given to all the rats. This anomaly has not been satisfactorily explained. The authors suggest that there may have been some variation in the quality of the flax seed and rolled oats. They argue further that under the conditions of their experiments, the state of the metabolism was so unstable that very slight changes sufficed to render the deposition of lime salt possible in an animal in whom previously no lime salts could have been deposited. Growth is necessary for the development of rickets. If growth in a rachitic animal were arrested, it is probable that a condition of osteoporosis would replace that of the rickets. As the rate of growth in the rats varied in different individuals, the development of the rachitic-like condition also varied. They then added to the deficient diets a sufficiency of phosphorus ions. The rats did not develop the rickets-like condition, notwithstanding the deficiency of the fat-soluble A factor. The authors are thus forced to the conclusion that phosphate ion in the diet acts as a determining influence for or against the development of rickets. When phosphates are present in sufficient excess, rickets or the rachitic condition cannot be caused. It, therefore, follows that the deficiency of the fat-soluble A factor is not the sole causal agent in rickets. Clinical observation has revealed that the phosphate content of the blood of rachitic children is low and that it increases rapidly under the beneficial influence of cod liver oil. On the other hand, the experiments proved that the addition of phosphates to the diet poor both in phosphates and fat-soluble A factor did not prevent the development of xerophthalmia. It is not unreasonable to assume that rickets and xerophthalmia have a different aetiology. Whether phosphorus is essentially bound up with the fat-soluble A factor or not has yet to be shown. We are reminded of the highly significant work by Harden and Young on the phosphorus element of the co-ferment in the bio-chemical activity of yeast.

#### FEDERAL INCOME TAX RETURNS.

The attention of our readers is directed to the fact that Federal Income Tax returns must be lodged at the office of the Commissioner or Deputy Commissioner in the several cities of the Commonwealth in respect of professional incomes on or before July 31, 1921. This applies to medical practitioners in private practice as well as those holding salaried positions. The returns for incomes derived from property, including investments, must be lodged at the same date, while the returns for land tax purposes must be lodged by persons who owned land of an unimproved value of £3,000 or over on June 30, 1921, not later than August 31, 1921.

The Registrar of the University of Melbourne has directed our attention to the fact that the authorities of Trinity College, Dublin, are calling for applications from graduates of the Melbourne University, *inter alia*, for appointment to an exhibition in gynaecology and obstetrics. The value of the exhibition is £100 and it is tenable for one year, with free residence at Trinity College for six months. The exhibitor is eligible for election to the staff of the Rotunda Hospital. Applications should be lodged with the Registrar of the University of Melbourne not later than July 16, 1921.

<sup>1</sup> Bulletin of the Johns Hopkins Hospital, January, 1921.

<sup>2</sup> Bulletin of the Johns Hopkins Hospital, May, 1921.

## Abstracts from Current Medical Literature.

### ORTHOPÆDIC SURGERY.

#### (28) Orthopædic Surgery from a Psychological Point of View.

Henry Keller (*New York Medical Journal*, May 18, 1921) deals with the psychological processes involved in the practice of orthopædics. He describes reflex action and points out that the more completely the control of muscles is assumed by the higher cortical centres, the less does the spinal cord act as a reflex centre for movement. Flechsig is quoted to support the view that association tracts in the cortex are not inherited, but are established in the individual after the brain has begun its functional activities. The sensation aroused by movement forms the basis of the individual's perception of the movement of the body and limbs and takes a place in the field of education and consciousness through the association areas in the cerebral cortex. The principle of kinæsthetic equivalents expresses the truth that the person must in every case have some thought or mental picture in his mind which is equivalent to the feeling of the movement he desires to make; if not, he cannot succeed in making it. Pain is discussed in connexion with orthopædic affections and the author points out that, even after the removal of the physical cause of pain, the patient may suffer from the mental recollection of it for a period extending into weeks. The mental attitude of the cripple is discussed. The difference between the sexes in regard to a deformity is analysed. For the boy, deformity means dependence on others in the struggle for existence; for the girl, independence is not such a desirable thing. Deformity tends to detract from her appearance and thus makes independence a necessity. Boys are anxious to have disability removed, girls are most concerned with improving appearance.

#### (29) Amputations.

Edred M. Corner (*Lancet*, January 15, 1921) claims that, as a result of the experience of war, all the classical amputations of the foot and lower leg, from amputation at the metatarsophalangeal joint to the "high Syme" amputation, have been eliminated, while higher up the Stephen Smith operation has been abandoned and, with it, all the operations designed to retain the patella (e.g., the Lister, Gritti and Stokes-Gritti operations). Amputation through the middle of the leg and amputation in the thigh by anterior and posterior flaps with a posterior scar, are the only operations left. The best amputation at the hip is that done by a racket-shaped anterior incision, with division of the neck of the femur. The muscles are cut short. It is useless to operate less than 7.5 cm. above or below the knee-joint, or to divide the femur less than 7.5 cm. below the lesser trochanter. Amputation through the neck is preferable to the latter pro-

cedure. All forearm amputations are done by means of equal anterior and posterior skin flaps and circular division of the muscles. It is useless to amputate less than 7.5 cm. below the elbow. Amputations through the upper arm are done with a circular incision which near the axilla becomes racket shaped. Amputations through the knee and elbow joints are inferior to other procedures above or below these joints. The result of experimental investigation of the use of light metal splints is mentioned.

#### (30) Development of Cysts in Connexion with the External Semilunar Cartilage.

Robert Ollerenshaw has described three cases of cystic changes occurring in the external semilunar cartilage of the knee-joint (*Brit. Journ. of Surgery*, April, 1921). In each case the patient complained of pain in the knee and there was a localized swelling situated on the lateral aspect of the joint. In the first case the cyst alone was removed, but pain and swelling occurred six months later. The lateral meniscus was then removed and a cyst was opened, from which a clear, glycerine-like fluid escaped. When examined microscopically the cysts had a lining of flattened endothelium, similar to that lining the synovial membrane. The author's view is that the cysts are developmental in origin and due to small endothelial inclusions in the cartilage during its development. These may become distended from irritation set up by trauma, though the condition has never been described in the medial meniscus, which is more frequently injured.

#### (31) Sling Suspension Method of Exercise in Infantile Paralysis.

Fred. J. Gaenslen (*Surg., Gynec. and Obstet.*, March, 1921) draws attention to a method of exercising the paretic muscles of patients who have suffered from infantile paralysis. It consists in suspending the extremities which are to be exercised in a sling in mid-air, so as to eliminate the effects of gravity and friction. The method is more suitable for those cases in which there is a little movement. There are a number of illustrations, showing the application of the method to various movements. Flexion and extension of the hip can be performed with the patient lying on the opposite side, the knee splinted to prevent it flexing and the ankle suspended in a sling. For adduction and abduction at the hip the patient lies in the recumbent position and both ankles are supported in slings. Attention is called to the danger of exercise fatigue and to the necessity for limiting movement so that groups of muscles may not be over-stretched.

#### (32) Plaster Rope Case.

An easily-made and effective apparatus for treating such conditions as compound fractures of the leg is described by A. E. Gordin (*Surg., Gynec. and Obstet.*, March, 1921). Plaster ropes are made about 5 cm. wide, in 10 to 15 layers and of suitable length

to form anterior and posterior bands which are moulded to the front and back of the leg. Round these longitudinal bands transverse bands are wound at suitable intervals, satisfactory intervals being allowed for drainage and dressing. In the splint which is illustrated the author has used a broad band above the knee, four are placed between the knee and ankle and four secure the foot.

#### (33) Anterior Bow Legs.

Anterior bow legs are seldom an exclusively anterior deformity, except in the earliest stages, since deviation to one or other side is also usually present. Occasionally the deformity of rachitic tibia bent anteriorly is so extreme that the distance from the heel to the knee is shortened by one half. As treatment for the condition, osteoclasia has a strong advocate in Wallace Blanchard (*Journ. Orthop. Surg.*, January, 1921). This is combined with simple transverse tenotomy of the *tendo Achillis*. In one of the author's cases tenotomy and osteoclasia was done four times and the gain in length was 10 cm. Osteoclasia should not be performed until deviation of the bones is complete. Robert Lovett showed that this occurs when the normal clearness and regularity of outline seen in the radiogram returns. Non-union frequently follows osteotomy and is due to the fact that the chisel carries down extraneous material. The author has never had a case of non-union following osteoclasia, nor has he seen any injury to joints.

#### (34) A Pin Method for the Approximation of the Fragments in Fractured Patella.

A. E. Hertzler (*Surg., Gynec. and Obstet.*, March, 1921) describes a method of treating fractures of the patella to which he had his attention drawn by G. A. Nickelson. Strong pins are passed through the tendons, as close as possible to the patella. These pins are then approximated by means of bandages or adhesive strips. The broken fragments are then brought into approximation. Long bone drills may be used as pins and can be inserted under local anaesthesia. They cause practically no irritation and the method can be used when the facilities which are essential for an open operation are not available.

#### (35) The Treatment of Large Defects in Peripheral Nerve Injuries.

John S. B. Stopford has investigated the advantages and disadvantages of many of the operations which have been advocated to cope with the problem of large defects in peripheral nerves (*Lancet*, December 25, 1920). Plastic operations, incomplete nerve crossing and the operation of bridging with nerve tissue, fascial sheath or a vein are now without justification. Displacement of the nerve is often successful, but the two-stage operation offers the best solution of the difficulty. There appears to be no reason why a three-stage operation should not be done when very extensive defects exist.



## MORPHOLOGY.

## (36) The Cells of the Arachnoid.

In the *Bulletin of the Johns Hopkins Hospital*, October, 1920, Lewis H. Weed has described the varying morphology of the cells lining the subarachnoid space and, as far as possible, the conditions which determine these changes in form. Attention is first directed to the structure of the *arachnoidea*. This consists of an arachnoid membrane, from the inner surface of which arachnoid trabeculae project to the *pia mater*. The membrane is a cellular structure with a delicate supporting reticulum, covered on both sides by characteristic cells. These cells are continued on to the trabeculae. In the resting state they are of a low type, flat, with large, pale, oval nuclei. Their cytoplasm contains fine granules which are of larger size near the nucleus. Dissected spread preparations examined with the binocular microscope were more satisfactory for study than histological sections. In response to the stimulus of particulate matter, such as carbon particles, the arachnoid cells enlarge, become cuboidal and multiply. They also become phagocytic. Finally, they may become detached, forming free-moving macrophages in the subarachnoid space. A similar response occurs on the injection of isotonic solutions of laked blood and in the early stages of certain infections of the meninges. A further significant change in the cells of the arachnoid membrane is the tendency to form well localized cell clusters. These cell clusters were studied in material from a series of cats. They were never seen in very young animals and showed a definite increase in number with age. They were observed by staining the membrane *in situ* with a dilute solution of toluidin or methylene blue, after removal of the cranial vault. While visible to the naked eye, they were best examined with the binocular microscope and by the study of histological sections. As has long been known, these cell clusters are the seat of the areas of calcification frequently found in the arachnoid membrane. In two of the cats examined, however, a much more intense proliferative process had taken place in the meninges. In the one animal there were apparently enlarged cell clusters, while in the other animal two obvious masses of new growth, forming relatively large tumours, were present. On microscopic examination both the apparent cell clusters and the tumours were found to show all the characteristics of the so-called dural endothelioma in man. These observations and other evidence strongly suggest that endotheliomata of the meninges arise as the result of increased hyperplasia of the arachnoid cell clusters. The question as to whether the cell clusters themselves are due to pathological causes or are merely a result of senescence is decided by the author in favour of their being due to old age. The regional distribution of the cell clusters in the cat was found to be as follows: In the

brain the greater number of nodules appeared in the arachnoid membrane as it bridged the larger sulci, particularly in the cruciate and Sylvian regions. In general, the dorsal regions of the brain presented numerous nodules, while the ventral surface of the brain stem was practically always free. The same rule applied to the spinal cord.

## (37) The Development of the Sympathetic Nervous System in Man.

Albert Kuntz has investigated the development of the sympathetic nervous system in man by a study of the human embryos included in the embryological collection of the Carnegie Institute (*Journal of Comparative Neurology*; October 15, 1920). The primordia of the sympathetic trunks arise in human embryos of about 5 mm. in length as a small group of cells lying along the dorso-lateral aspects of the aorta in the lower thoracic and upper abdominal region. In embryos of 6 mm. length they are present from the lower cervical to the sacral region and by reason of the strong curvature of the embryo at this stage the cells constituting the primordia of the segmental ganglia lie in such close proximity with each other that they have the appearance of a continuous column of loosely aggregated cells. This obtains till the embryo reaches a length of 10 to 11 mm., when the primordia are noted in the upper cervical region as well. These primordia arise from cells of cerebro-spinal origin advancing peripherally along the dorsal and ventral roots of the spinal nerves. The vagal sympathetic plexuses except in the aboral parts of the digestive tube arise in similar fashion and advance along the vagi. The more distal enteric plexuses arise from cells derived from the sympathetic supply in the lower trunk region. The ciliary ganglion is derived from the semilunar ganglion *via* the ophthalmic nerve. The primordial cells of the sphenopalatine ganglion advance along the greater superficial petrosal nerve, originating also from the semilunar ganglion *via* the maxillary nerve. The primordia of the otic ganglion arise at the growing extremity of the lesser superficial petrosal nerve as an aggregate of cells which advance primarily from the petrosal ganglion. This ganglion also receives cells of trigeminal origin *via* the mandibular nerve. The submaxillary and sublingual ganglia arise on the lingual nerve primarily from cells of trigeminal origin. They probably receive some cells of facial origin *via* the *chorda tympani*. The smaller ganglia on the glosso-pharyngeal nerve in the posterior portion of the tongue arise from cells which advance into the tongue along the glosso-pharyngeal fibres. The cells which give rise to sympathetic neurones are derived from both cerebro-spinal ganglia and the neural tube. Not all of those cells actually migrate as such, as many arise by mitotic division of the migrant cell along the paths of migration and in the primordia of the sympathetic nervous system.

## (38) Anomalous Fibrous Cords in the Hand.

E. D. Congdon (*Anatom. Record*, August 20, 1920) describes curious tendinous cords found in the right hand of an aged male subject. These fibrous cords lie upon the volar aspect of the fourth and fifth fingers. They arise from the radial side of the proximal phalanx and pass to the volar surface of the vaginal ligaments. Here each cord bifurcates. The two slips thus formed embrace the middle phalanx, being inserted partly into the vaginal ligament and adjacent fascia and partly into the edge of the extensor aponeurosis. The tendons of the *flexor sublimis digitorum* muscle, the lumbrical and the interosseous muscles are also all present, exhibiting no abnormality or deficiency. The author discusses the work of previous observers on the phylogeny of the forearm and palmar musculature, among whom may be mentioned McMurrich, Eisler and Bardeleben. The cords described seem to be comparable to the short superficial digital flexors of amphibians, reptiles and mammals. These digital flexors arise usually from the volar fascia and are inserted into the sides of the metacarpo-phalangeal joint or more distally. It was first suggested by Eisler that the terminal portion of the *flexor sublimis* tendon with its bifurcated insertion might be a degenerated superficial flexor muscle of the digits which had been transformed into a tendon, and that at the same time by means of its attachment to the palmar aponeurosis it became continuous with a part of the fore-arm flexor mass which had at an earlier phylogenetic stage an undifferentiated insertion only into the palmar aponeurosis. Further evidence for this hypothesis was obtained by McMurrich who at the same time amplified and expanded our knowledge of the phylogeny of the forearm and palmar musculature. Further, Grafenberg (1905) found in the hand of a human embryo a short flexor muscle which joined a forearm mass to form a composite *flexor sublimis* muscle. The author states that there is some objection to considering these fibrous cords as rudiments of the short flexors of lower animals in view of their co-existence with normal *flexor sublimis* tendons. The author attempts to overcome this difficulty by suggesting that at an early period the short flexors divided into two portions, the one giving rise to the *flexor sublimis* tendons and the remaining portion persisting as a rudiment of the short flexors. Support to this view is given by the fact that a few lower mammals have been found to possess both the short flexors and the *flexor sublimis* tendons. A case in man, described by Fromont, is also discussed, in which apparently in two of the fingers the *flexor sublimis* tendon was absent and replaced by short flexor muscles. In the remaining two digits slips of this short flexor mass gained insertion into the normal *flexor sublimis* tendon.

## Medical Societies.

### THE BRISBANE GENERAL HOSPITAL CLINICAL SOCIETY.

A meeting of the Brisbane General Hospital Clinical Society was held on February 10, the President, Dr. R. A. Meek, in the chair. About 40 members and visitors were present.

Dr. George Thomson showed a patient who was suffering, in his opinion, from lead poisoning. The patient was a married man of 26 years and a tinsmith by trade. On admission four months previously he had complained of loss of power in his lower limbs, headaches, severe abdominal pain and marked constipation.

No abdominal signs were found on examination of the nervous system and his urine was found free of abnormal elements. The condition was diagnosed as a functional nervous disorder and after a slight improvement following two months in hospital the patient was discharged. Three weeks later he was re-admitted suffering from general tremors. He was sent to Dr. Thomson for ophthalmoscopic examination. He walked with a distinct steppage gait and he had noticeable tremors of his arms and head. Both pupils were dilated and reacted slowly to light and accommodation. Vision was  $\frac{4}{60}$  in both eyes and both visual fields were contracted concentrically. No scotoma, relative or absolute, was present. Examination of the fundus revealed clearness of the media and well-marked neuro-retinitis with swelling of both discs to the extent of about two diopters and marked blurring of their edges. The arteries were markedly diminished in calibre and the veins distended. The ocular movements were good; there was no nystagmus and no appreciable refractive error. No blue line was visible on the patient's gums and there was no wrist drop.

Dr. Thomson said he had made a diagnosis of lead poisoning from a consideration of the history of headaches, constipation and colic, the paraplegia of the lower limbs, the steppage gait and general tremors, the progressive loss of weight, the pasty, anæmic appearance of the face and the presence of well-marked optic neuritis in a man whose occupation had caused him to handle lead for a period of some ten years. The Wassermann reaction had failed to appear in the blood. Many medical men had seen the patient recently and all had made the diagnosis of functional disorder of the nervous system. It was important to make an early examination of the fundus in all cases of persistent headache and especially of paraplegia, however slight.

In the discussion Drs. F. G. Power, Eustace Russell and A. Graham Butler stated that they had examined the patient on previous occasions. They considered the condition was functional in nature.

Dr. R. Graham Brown said he could find no trace of optic atrophy which should have been present in a case of such long standing if the diagnosis of lead poisoning were correct.

In his reply Dr. Thomson stated that the ocular changes had not been in progress sufficiently long to produce optic atrophy.

Dr. R. A. Meek showed a patient who had been operated on for epithelioma of the lower lip of four months' duration. The glands of the neck had been removed by a radical operation, the technique followed being a modification of that of Maitland and Butlin. He demonstrated that the head movements were little impaired by the removal of the sterno-mastoid muscle. He usually removed the internal jugular vein as well. In this case the lower part of the parotid had been removed as the glands were closely associated with it. As the growth on the lower lip was rather extensive half of it had to be removed. The restoration of the contour of the lip had proved the most difficult part of the operation. An incision had been made directly backwards from the angle of the mouth, forming the base of a triangle which had been removed from the cheek. He had carried the lower part of the cheek forward to fill up the gap in the lower lip and had stitched over the mucous membrane.

Dr. A. Graham Brown presented a man, sixty years of age, who suffered from a swelling on the left side of the

face. It was diagnosed as malignant disease of the antrum.

Dr. J. B. MacLean showed a male patient of sixty years who had enlarged glands in the submaxillary region. A primary carcinoma of the larynx had been discovered.

In the subsequent discussion Dr. Graham Brown stated that five similar cases had come within his experience. The symptoms were very insidious, pain being absent until late in the disease. Operative interference was usually out of the question owing to the advanced condition. He raised the question as to whom patients suffering from malignant disease of the antrum should be sent. Several members stated that these cases usually came within the province of general surgeons.

Dr. Eustace Russell read notes and presented radiograms of the cases of two patients suffering from symptoms of gastric disturbance.

The first was a woman of 56 years who had complained of dragging pains on both sides of the abdomen and over the lower ribs. Her appetite was good. There was general tenderness over the whole abdomen, flatulence and vomiting after food. Radioscopic examination pointed to the presence of a gastric ulcer. At operation nothing abnormal was found even after the stomach had been opened.

Dr. Russell's second patient was a woman, aged 34 years, who had complained of a dragging feeling round the umbilicus. No ova or larvae had been found in the faeces. The radioscopic appearance was indicative of duodenal ulcer. At the operation no ulcer was found. There were adhesions round the head of the pancreas which was enlarged.

Dr. E. S. Meyers showed a male patient of 60 years who for the previous two years had complained of pain after food at intervals and occasional vomiting. A skiagram revealed an ulcer on the lesser curvature and a filling defect in the pylorus. The man had lost much weight. In October, 1920, the abdomen had been opened and an indurated mass found on the lesser curvature, extending from the cardia to the pylorus. A posterior gastro-enterostomy had been performed. Since operation he had gained 20 kilograms in weight and could eat any food. Dr. Meyers was uncertain whether the condition was one of carcinoma or a large chronic ulcer.

Dr. J. M. Thomson stated that the value of X-ray findings was overrated. He did not think that diagnosis was better now than in the past, when surgeons had to rely on the history and physical signs only.

Dr. J. B. MacLean urged greater co-operation between the physician, the surgeon and the radiographer and referred to the work of Mr. Devine.

Dr. V. McDowall defended the radiographer, who, he considered, made no more mistakes than the surgeon and physician. X-ray appearances were only shadows and had to be interpreted in the light of the clinical history.

Dr. E. S. Meyers pointed out that Dr. Russell had performed no chemical tests in his cases and supposed that this was due to lack of facilities. He drew attention to the need of pathological and bacteriological departments in the Hospital and expressed the hope that the Queensland Branch of the British Medical Association would assist the Medical Superintendent to obtain them.

Dr. H. J. Stewart showed a patient suffering from Banti's disease and demonstrated the signs and symptoms.

Dr. A. Anderson presented a patient who suffered from pre-ataxic tabes with gastric crises which took the form of attacks of acute abdominal pain and incessant vomiting. These were the only symptoms extending over a period of two years. Appendicectomy and gastro-enterostomy had been performed during this period with no relief of symptoms. Six months later lightning pains, anæsthetic areas and an Argyll-Robertson pupil developed. The Wassermann reaction had been obtained.

Dr. J. Hardie showed a patient suffering from syphilitic periostitis of the arm.

Dr. A. H. Marks exhibited a specimen of endothelioma of the ovary.

Dr. J. M. Thomson read notes of the cases of three patients who had been under his care.

The first was a girl of 18 years who had been admitted to the Hospital on December 15, 1920. She was then five months pregnant. She complained of pain in the right loin, frequency of micturition and scalding. On examination she was found to be tender in the right iliac fossa. The urine

was alkaline in reaction and contained pus, albumin, epithelial cells and *Bacilli coli communis*. The patient was markedly constipated and a preliminary diagnosis of enteric fever was made. It was then found that the leucocyte count was 16,000 per cubic mm.; a few days later it was 22,000. The diagnosis of pyelo-nephritis was then made, an operation was performed and the right kidney drained. The convalescence was uneventful and the pregnancy continued uninterrupted.

The second patient was also a girl of 18 years, who complained of severe pain in the right loin of one week's duration. She had frequently vomited during the exacerbations of pain. The right kidney was markedly tender on pressure. The urine was acid in reaction and contained blood, pus and albumin. An operation was performed and the pelvis of the right kidney was found to be distended with pus. Clamps were left on the pedicle of the kidney owing to great difficulty in controlling hæmorrhage. They were removed on the following day and no further hæmorrhage took place. The convalescence was without incident.

Dr. Thomson's third patient was a woman of 37 years who had been admitted in November, 1919, complaining of sudden, severe pain in the right side of the abdomen, vomiting and frequency of micturition. There was marked tenderness over the right kidney and right iliac region. A mass could be felt on the right side. On vaginal examination some fullness and tenderness in the right fornix were demonstrable. The urine was acid and contained blood, pus and albumin. The kidney was found to be full of pus and was drained. No calculi were discovered. The temperature and tachycardia subsided after the operation. Twelve months later she was re-admitted complaining of pain in the right loin. The urine contained blood, pus and albumin. Radiograms showed numerous shadows in the right kidney region, in the right ureter and in the gall bladder. The patient had a "swinging" temperature and left the hospital, refusing operation. Five weeks later she was re-admitted in a uræmic condition and died. *Post mortem* the pelvis and calyces of the right kidney were found to be distended. Each calyx contained one or more calculi. The right ureter was 1.2 cm. in diameter and three calculi were found in it. At the X-ray examination five weeks before only two calculi had been seen. Evidently a third had blocked the ureter and caused the fatal uræmia. The left kidney was atrophic and contained no definite renal substance. This was apparently a congenital abnormality. The gall bladder contained three calculi.

Dr. G. P. Dixon stated that a cystoscopic examination with catheterization of the ureters and estimation of the renal function should always be carried out in these cases. He referred to the work of Kidd and pointed out that with renal lavage cases often cleared up even though pyelo-nephritis was present.

Dr. D. A. Cameron emphasized the value of cystoscopy. He considered that the kidney was excised too frequently. Drainage was in many cases all that was required.

Dr. V. McDowall gave a demonstration of radiograms illustrating various morbid conditions.

## University Intelligence.

### THE UNIVERSITY OF SYDNEY.

A meeting of the Senate of the University of Sydney was held on July 4, 1921.

The degree of Master of Surgery was conferred *in absentia* upon Mr. William Robert Page, M.B., of Grafton.

The following appointments were made:

*Lecturer in Dental Materia Medica and Therapeutics:* Mr. Percy C. Charlton, L.D.S. (Eng.), D.M.D. (Harvard).

*Honorary Demonstrator in Anatomy:* Dr. N. D. Royle.

The Senate of the University has decided to make an appeal to the Government for an increase in its statutory endowment. The amount of compensation to be given to the University on account of the free attendance of public exhibitors was fixed at £20,000 per annum in 1913, before the recent great increase in the price of all commodities. Recently prices of all material have advanced to such an

<sup>1</sup> The right kidney was apparently removed.—Ed.

extent that in some cases the cost of scientific apparatus and material has more than doubled since 1913. The University found it necessary to increase by 50% the fees payable by paying students and with the necessary increases which have been made in salaries and wages, the University finds itself in a difficult position.

A letter was received from His Excellency the Governor, relating to an offer from the Ben Fuller Loan Trust for University students. On the recommendation of the Professorial Board, it was decided to inform the Governor that the Board welcomes the establishment of the Ben Fuller Trust Loan Fund for students; and that members of the Board will be willing to furnish information and reports to the Trust upon applications for loans and to give assistance to the Trust in every way in their power. The Senate also expressed its thanks for the liberality in meeting such a need.

Applications from the dental undergraduates and the Dental Board of New South Wales, requesting the Senate to confer the degree of D.D.S. instead of B.D.S. after four years' study in the dental curriculum, was referred to the Professorial Board for report.

The following were appointed examiners for the conduct of the August examinations in Medicine:

*Medicine:* Professor A. E. Mills, Dr. C. Purser.

*Clinical Medicine:* Dr. G. E. Rennie, Dr. C. B. Blackburn, Dr. J. Macdonald Gill, Dr. H. J. Ritchie.

*Surgery:* Professor F. P. Sandes, Sir Herbert Maitland.

*Clinical Surgery:* Dr. C. MacLaurin, Dr. J. Morton, Dr. C. E. Corlette, Dr. H. S. Stacy.

*Obstetrics:* Dr. J. C. Windeyer, Dr. S. H. McCulloch.

*Gynecology:* Dr. Fourness Barrington, Dr. George Armstrong.

The income of the following private foundations being now sufficient to provide for increases in the stipends or awards, the Senate adopted the recommendations of the following faculties:

Faculty of Science; that the stipend of (1) the Caird Scholarship for Chemistry be increased from £50 to £100 per annum; (2) the John Coutts Scholarship for Science be increased from £50 to £75 per annum; (3) that there be two additional Slade Prizes of £5 each for practical geology and practical zoology respectively; (4) the H. C. Russell Prize for Astronomy be increased from £5 to £10.

Mr. Piddington moved the following motion:

"That the permanent posts on the teaching staff be filled by election after applications have been invited by advertisement, unless the Senate resolve, upon the report of the Committee, that a proposed teacher is of such acknowledged reputation in the subject to be taught that, in the opinion of the Senate, no one else of equal eminence is likely to apply.

Professor MacCallum moved as an amendment:

That when vacancies have to be filled, or when new lectureships or professorships are established, a committee shall be appointed to consider and report to the Senate, in each particular case, whether it is most advisable to proceed (1) by making inquiries among recognized authorities with a view to inviting an application, or (2) by promotion, or (3) by advertisement.

After a full discussion, Mr. Piddington's motion was carried.

### HUGH DIXSON RADIUM.

In 1918 Sir Hugh Dixon gave a parcel of radium, valued approximately at £1,000, to be used for scientific purposes. The condition of his gift was that, during the war, the radium was to be in the possession of the Royal Prince Alfred Hospital for purposes of medical research and application and that, as soon after as was possible, the Chancellor of the University of Sydney and the Chairman of the Hospital should meet and agree as to whether its application to medical or physical research would be the greater benefit to society. If they decided in favour of physical research, the radium was to become the property of the University absolutely. If medical science should have the preference, the radium was to be in possession of the Royal Prince Alfred Hospital for a period of five years, when a similar meeting would decide the question for a further period.

The Chancellor of the University and the Chairman of the



Board of Directors of the Royal Prince Alfred Hospital have held their first meeting, the result of which they have embodied in the following report, dated June 24, 1921:

We have given the matter careful consideration in the light of the best information obtainable respecting the utilities, present and future, on the one hand to scientific work at the University and on the other hand to the medical needs of the Hospital. The University is interested in both objects, in the latter through its close connexion with the Hospital. The Hospital, as such, is interested only in the latter.

We are fully satisfied that the radium presented by Sir Hugh Dixon would be of incalculable utility to research in physical science, other than medical, if retained at the University. In regard to research in medical science, it would be of more utility to the University if left for the time being at the disposal of the Hospital authorities. The terms of the donor's letter of gift make no distinction between different branches of science and do not exclude its application in medical research. The claims of the Hospital are indeed based upon the value of the material in the treatment of disease, but in so applying it medical research gains an opportunity not otherwise attainable. We gather that, though radium is very extensively employed as a curative agent at the Sydney Hospital in a form of preparation to which the Dixon gift is not in its present condition adaptable, the authorities of the Royal Prince Alfred Hospital meet the same end in the majority of cases by the use of the X-rays. But there are kinds of disease, such as internal cancer and certain uterine complaints, to which the X-rays are not applicable and in which the Royal Prince Alfred authorities have found the radium extremely useful, in, at all events, alleviating the sufferings of patients.

A suggestion was made that possibly the Dixon gift might be subdivided, so that each institution might retain a half. We do not see how this could be done without the authority of Parliament, or possibly an order in Equity, assuming, if report is made to the latter, it could be shown that the donor's intentions could not be carried out in their entirety. This, we think, might be rather difficult to show. The same remarks would apply to any proposal for altering the form of the present parcel, so as to make it available to the Hospital for the treatment of cases to which radium is mostly applied in the Sydney Hospital.

What chiefly weighs with us is that the retention of the radium by the Hospital for the time being still leaves to the University a certain benefit in relation to medical research and the consideration urged by the Hospital, based on the more immediate claims of suffering humanity, a matter which would certainly appeal to the public, on whose support and confidence both the University and the Hospital so vitally depend.

We express a most earnest desire that the liberality shown by Sir Hugh Dixon may inspire some other public benefactor to provide a like gift to either University or Hospital, in which case it is probable that the rather perplexing problems presented to us by the terms of Sir Hugh Dixon's gift could be answered once for all.

Our decision in regard to the next five years is that the Dixon radium should remain in the possession of the Royal Prince Alfred Hospital.

## Naval and Military.

### APPOINTMENTS.

The following notifications have appeared in the *Commonwealth of Australia Gazette*, No. 56, of June 30, 1921:

#### Australian Imperial Force.

The following appointments are terminated:

##### Second Military District.

Captain H. S. Kirkland, 21st March, 1920.

##### Third Military District.

Captain A. G. R. Lilford, M.C., 30th May, 1921.

Captain W. H. Steel, 31st August, 1920.

#### Australian Naval and Military Expeditionary Force.

##### APPOINTMENTS TERMINATED.

##### Second Military District.

Captain H. H. Skeoch, 11th May, 1921.

Captain (Honorary Major) F. McIntyre, 16th June, 1921.

##### Fourth Military District.

With reference to Executive Minute No. 185/1921, promulgated in *Commonwealth of Australia Gazette*, No. 53, of 16th June, 1921, the date of termination of appointment of Lieutenant-Colonel J. W. Flood is amended to read 31st May, 1921.

#### Australian Military Forces.

##### First Military District.

##### Australian Army Medical Corps—

Major F. L. Bignell, D.S.O., is transferred to the Australian Army Medical Corps, Second Military District, 1st June, 1921.

Captain, provisional, R. V. Graham and Captain T. W. Van Epen are transferred to the Australian Army Medical Corps, Second Military District, and to be supernumerary to establishment, 1st June, 1921.

Captain C. E. Tucker is transferred to the Reserve of Officers, 1st June, 1921.

##### Second Military District.

##### To be Major—

Honorary Major Denis Joseph Glissan.

The notification respecting the grant of the substantive rank of Captain on the Reserve of Officers to Colin Anderson, M.C., which appeared in Executive Minute No. 191/1920 promulgated in *Commonwealth of Australia Gazette*, No. 36, dated 22nd April, 1920, is cancelled.

##### Australian Army Medical Corps—

Hilton William Tillock Chenhall and Malcolm Britnell Fraser to be Lieutenants (provisionally), supernumerary to establishment, 1st June, 1921.

Major F. L. Bignell, D.S.O., is transferred from the Australian Army Medical Corps, First Military District, 1st June, 1921.

Captain (provisionally) R. V. Graham and Captain T. W. Van Epen are transferred from the Australian Army Medical Corps, First Military District, and to be supernumerary to establishment, 1st June, 1921.

##### Reserve of Officers—

Captain H. Symonds is transferred to the Reserve of Officers, Third Military District, 1st June, 1921.

Major E. P. McDonnell is placed on the Retired List, with permission to retain his rank and wear the prescribed uniform, 1st June, 1921.

##### Third Military District.

##### Australian Army Medical Corps—

Honorary Captain (Temporary Major) B. Foster is appointed from the Reserve of Officers, and to be Captain (Temporary Major), 1st June, 1921.

Honorary Captains H. G. Loughran, S. H. Allen and M. B. O'Sullivan are appointed from the Reserve of Officers, and to be Captains, 1st June, 1921.

Lieutenant (provisional) B. C. Cohen is transferred to the Australian Army Medical Corps, 5th Military District and to be supernumerary to establishment, 1st June, 1921.

##### Reserve of Officers—

Captain H. Symonds is transferred from the Reserve of Officers, 2nd Military District, 1st June, 1921.

Captain A. MacMillan is transferred to the Reserve of Officers, Fourth Military District, 1st June, 1921.

The names of Major D. A. Shields, Honorary Major J. K. C. Laing, Captains J. R. Lee and L. C. Lade are removed from the Reserve of Officers List, under the provisions of Australian Military Regulation 159, 31st May, 1921.

**Fourth Military District.****To be Honorary Captain—**

G. Wien Smith, 1st March, 1916.

**To be Captains—**

Honorary Captain, Geoffrey Wien Smith, 1st October, 1920.

John Alexander Love, 1st July, 1920.

**Reserve of Officers—**

Major H. H. Montgomery is transferred to the Reserve of Officers, 5th Military District, 1st June, 1921.

Captain A. MacMillan is transferred from the Reserve of Officers, Third Military District, 1st June, 1921.

The temporary rank of Major, granted to Honorary Captain A. I. Chapman, is terminated, 30th April, 1921.

**Fifth Military District.****Australian Army Medical Corps—**

Lieutenant (provisional) B. C. Cohen is transferred from the Australian Army Medical Corps, Third Military District, and to be supernumerary to establishment, 1st June, 1921.

The notification respecting the transfer to the Reserve of Officers of Captain (temporary) E. C. East, which appeared in Executive Minute No. 156/1921, promulgated in *Commonwealth of Australia Gazette*, No. 38, of 28th April, 1921, is cancelled.**Reserve of Officers—**

Major H. H. Montgomery is transferred from the Reserve of Officers, 4th Military District, 1st June, 1921.

**Sixth Military District.****Australian Army Medical Corps—**

Edmund Alfred Elliott to be Captain, (provisionally), 1st June, 1921.

**VENEREAL DISEASES.****Returns for the Year 1920.**

WESTERN AUSTRALIA.				
	Males.		Females.	Total (Both Sexes).
Syphilis—				
Primary .. ..	79	..	13	.. 92
Secondary .. ..	31	..	10	.. 41
Tertiary .. ..	26	..	6	.. 32
Congenital .. ..	1	..	0	.. 1
Total .. ..	137	..	29	.. 166
Gonorrhœa .. ..	683	..	82	.. 765
Chancroid .. ..	43	..	1	.. 44
Granuloma .. ..	4	..	4	.. 8

TASMANIA.				
	Males.		Females.	Total.
	Married.	Single.	Married.	Single.
Syphilis .. ..	25	35	10	20
Gonorrhœa .. ..	57	237	15	37
Chancroid .. ..	4	8	0	0

**PUBLIC HEALTH ASSOCIATION OF AUSTRALASIA.**

The inaugural meetings of the State Branches of the Public Health Association of Australasia have been held in Victoria, New South Wales, South Australia, Western Australia and Tasmania. In Queensland the meetings have been postponed for a short time. In several instances the lay press has lent powerful assistance in directing public attention to the importance of the work to be undertaken by this Association. The Executive Committee has now appealed to the various State Branches to commence work on a co-operative basis. It has been proposed that the first annual conference should be held in September, 1921. The Branches have been requested to convene meetings if possible once a month for the purpose of discussing the problems of the reduction of infantile mortality, the combating of pulmonary tuberculosis and the effect of variations of

diet on health. The first two subjects have already occupied the attention of the members of the Victorian Branch of the Public Health Association. The immediate result of these debates will be full dress discussions at the annual conference. The co-operation of existing societies and other undertakings concerned with the subject matter of the debates has been invited. It is to be hoped that after all the talk some definite programme of research will arise, so that the result of the endeavour may be an increase in knowledge and not merely a tabulation of what has already been discovered. Dr. J. F. Drake, of Melbourne, has made a significant proposal that a scholarship should be founded for the best essay on the prevention of pulmonary tuberculosis open to students. He has offered one hundred guineas toward the foundation.

We have received a circular from the Dean of the Post-Graduate Medical School, attached to the University of Vienna, containing information concerning the second international post-graduate course which was held on June 6 to 18, 1921, and announcing further courses for September and December. The circular is obviously addressed to American medical practitioners. It is supposed to be in the English language, but the attempt is not creditable. It appears, however, that many highly interesting subjects will be dealt with by lecturers of considerable eminence, including Professors Elselsberg, von Pirquet, Schick, Albrecht, Hans Meyer and Marburg. A nominal fee of 1,000 crowns (stated to be equivalent to about £1 10s.) is charged for the course of lectures.

**Correspondence.****SPINAL ANÆSTHESIA.**

Sir: I am glad that Dr. Zwar has found my paper on spinal analgesia of interest and thank him for stating his results as regards para-paresis and headaches.

I feel confident that, by adopting the precautionary measures advised in my paper, the percentage of headaches can be reduced to an almost negligible minimum. The position as regards paralyses is more serious. No paralyses, however, have been reported in the literature of the last five years. It is instructive to learn that, of Dr. Zwar's long series, the two patients in whom permanent pareses remained, were syphilitic; a routine serological test before spinal analgesia seems to be indicated.

In spite of the remote risk of paresis, spinal analgesia does seem to be definitely the anæsthetic of choice in many severe operations on the lower half of the body in old people.

Instances could be multiplied of declarations by eminent surgeons that the mortalities of certain operations have been markedly reduced since the employment of stovaline; a few examples are high amputations of the lower extremity, pan-hysterectomy and strangulated hernia.

A few weeks ago I had occasion to perform litholapaxy on a weak old man of 81 years, sent to me by Dr. A. C. Holt, of Beecroft. With the "sacral-nerve-area" technique described in my paper, the patient was as little affected by the operation or the analgesia as though nothing had been done. In addition to this, the operation, difficult because of the presence of an enlarged prostate, was facilitated by reason of the entire absence of the "bladder reflex."

I have already pointed out the fact that in certain cases of very severe reno-vesical tuberculosis, the "sacral-nerve-area" technique permits complete diagnosis and prognosis, impossible by any other means.

In most cases of prostatectomy the advantages of spinal analgesia are so many and so important as to outweigh any consideration, such as the extremely remote risk of residual paresis.

In the sparsely populated parts of Australia, where practitioners cannot always secure the help of an anæsthetist, a knowledge of spinal analgesia technique (easily acquired) would be of untold value under many circumstances.

Yours, etc.,

R. J. SILVERTON.

Macquire Street, Sydney,  
July 11, 1921.

## Proceedings of the Australian Medical Boards.

### WESTERN AUSTRALIA.

The undermentioned have been registered under the provisions of *The Medical Act, 1894*, as duly qualified practitioners:

Masayosie Masuyama, M.B., 1917 (Med. Col., Japan), Broome.

Oswald Reford Corr, M.B., B.S., 1921 (Melb.), Perth.

William Hunter Watson Cheyne, M.R.C.S. (Eng.), L.R.C.P. (Lond.), 1913, Perth.

Cloth cases for binding *The Medical Journal of Australia* of standard pattern and with standard lettering can be supplied at four shillings each. Orders should be sent in to the office of this *Journal* as soon as possible, in order to insure early delivery.

### Books Received.

THE STOMACH AND ABDOMEN FROM THE PHYSICIAN'S STAND-POINT, by William Russell, M.D., LL.D.: 1921. London: Baillière, Tindall & Cox; Demy 8vo., pp. 320, with 35 illustrations. Price, 15s. net.

### Medical Appointments.

It is announced that Dr. E. J. Brooks has been appointed for six months on probation as Assistant Medical Officer to the Waterfall Sanatorium, New South Wales. The appointment dates from May 16, 1921.

### Medical Appointments Vacant, etc.

For announcements of medical appointments vacant, assistants, locum tenentes sought, etc., see "Advertiser," page xx.

University of Sydney: Professor of Psychiatry.

Public Service: Western Australia: Two Medical Officers.

### Medical Appointments.

#### IMPORTANT NOTICE.

Medical practitioners are requested not to apply for any appointment referred to in the following table, without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, 429 Strand, London, W.C..

Branch.	APPOINTMENTS.
NEW SOUTH WALES. (Hon. Sec., 30-34 Elizabeth Street, Sydney.)	Australian Natives' Association. Ashfield and District Friendly Societies' Dispensary. Balmain United Friendly Societies' Dispensary. Friendly Society Lodges at Casino. Leichhardt and Petersham Dispensary. Manchester Unity Oddfellows' Medical Institute, Elizabeth Street, Sydney. Marrickville United Friendly Societies' Dispensary. North Sydney United Friendly Societies. People's Prudential Benefit Society. Phoenix Mutual Provident Society.

#### Branch.

#### APPOINTMENTS.

#### VICTORIA.

(Hon. Sec., Medical Society Hall, East Melbourne.)

All Institutes or Medical Dispensaries.  
Australian Prudential Association Proprietary, Limited.  
Manchester Unity Independent Order of Oddfellows.  
Mutual National Provident Club.  
National Provident Association.

#### QUEENSLAND.

(Hon. Sec., B.M.A. Building, Adelaide Street, Brisbane.)

Australian Natives' Association.  
Brisbane United Friendly Society Institute.  
Stannary Hills Hospital.

#### SOUTH AUSTRALIA.

(Hon. Sec., 3 North Terrace, Adelaide.)

Contract Practice Appointments at Renmark.  
Contract Practice Appointments in South Australia.

#### WESTERN AUSTRALIA.

(Hon. Sec., 6 Bank of New South Wales Chambers, St. George's Terrace, Perth.)

All Contract Practice Appointments in Western Australia.

#### NEW ZEALAND: WELLINGTON DIVISION.

(Hon. Sec., Wellington.)

Friendly Society Lodges, Wellington, New Zealand.

### Diary for the Month.

- July 19.—N.S.W. Branch, B.M.A., Executive and Finance Committee.
- July 20.—Federal Committee of the B.M.A. in Australia.
- July 20.—W. Aust. Branch, B.M.A..
- July 22.—Q. Branch, B.M.A., Council.
- July 22.—Western Med. Assoc. (N.S.W.).
- July 26.—N.S.W. Branch, B.M.A.: Medical Politics Committee: Organization and Science Committee.
- July 27.—Vic. Branch, B.M.A., Council.
- July 28.—S. Aust. Branch, B.M.A..
- July 28.—Clinical Meeting at the Hospital for Sick Children, Brisbane.
- July 29.—N.S.W. Branch, B.M.A..
- Aug. 3.—Vic. Branch, B.M.A..
- Aug. 5.—Q. Branch, B.M.A..
- Aug. 9.—Tas. Branch, B.M.A..
- Aug. 9.—N.S.W. Branch, B.M.A., Ethics Committee.
- Aug. 10.—Melb. Paediatric Society (Vic.).
- Aug. 11.—Vic. Branch, B.M.A., Council.
- Aug. 11.—Brisbane Hospital Clinical Society.
- Aug. 12.—N.S.W. Branch, Clinical.
- Aug. 12.—Q. Branch, B.M.A., Council.
- Aug. 12.—S. Aust. Branch, B.M.A., Council.

#### EDITORIAL NOTICES.

Manuscripts forwarded to the office of this journal cannot under any circumstances be returned.  
Original articles forwarded for publication are understood to be offered to *The Medical Journal of Australia* alone, unless the contrary be stated.  
All communications should be addressed to "The Editor," *The Medical Journal of Australia*, B.M.A. Building, 30-34 Elizabeth Street, Sydney. (Telephone: B. 4635.)